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09/744,393	03/05/2001	Samuel W. D. Steel	36-1553	5720

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EXAMINER	
LE, MIRANDA	

ART UNIT	PAPER NUMBER
2177	10

DATE MAILED: 10/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/744,393	STEEL ET AL.	
	Examiner	Art Unit	
	Miranda Le	2177	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 August 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-5 and 7-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-5 and 7-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☒ The proposed drawing correction filed on *27 August 2003* is: a)☒ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

1. This communication is responsive to Amendment B, filed 08/27/2003.

2. Claims 2-5, 7-19 are pending in this application. Claims 2, 7, 11 are independent claims. In the Amendment B, claims 1-6 have been canceled, claims 11-19 have been added, and claims 2-5, 7 and 9 have been amended. This action is made Final.

3. The objection to the specification of the invention has been withdrawn in view of the amendment.

Claim Objections

4. Claims 2, 7, 12 are objected to because of the following informalities: "analysing" (claims 2, 7), "analyse" (claim 12) should be changed to "analyzing", "analyze", respectively. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless:
>
> (e) the invention was described in
>
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or
>
> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 2-5, 7-9, 11-15, 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Brown et al. (US Patent No. 6,026,398).

Brown anticipated independent claims 2, 7, 11, by the following:

As to claims 2, 7, Brown teaches "a method of generating an index entry for a record in a semi structured database, the database comprising a plurality of records, each record comprising one or more fields having a plurality of characters therein (col. 8, lines 1-16, col. 3, lines 27-38), the method including:

"(i) analyzing each field in accordance with a predetermined criterion so as to identify an entry within said field" at col. 8, lines 1-16, col. 12, lines 5-42, Fig. 2;

"(ii) generating at least one index entry representing a concordance between an identified entry and the record corresponding to the identified entry" at col. 8, lines 31-67, col. 9, line 1 to col. 10, line 59, Figs. 3-6,

"for each of a plurality of predetermined formats, in (i) further including searching said field to identify a sequence of characters having a format corresponding to o the predetermined format, said identified sequence of characters being deemed to constitute an identified entry" at col. 8, line 31 to col. 9, line 16, col. 9, line 36 to col. 10, line 59, col. 16, lines 29-48, Fig. 13;

"(iii) for at least one field, defining any characters not identified as an entry in step (I) as a free text entry" at col. 3, lines 39-47, col. 15, lines 54-61.

As per claim 11, Brown teaches "apparatus for accessing a semi-structured database in accordance with an input request for information, wherein the semi-structured database comprises a plurality of items, each item comprising one or more fields having a plurality of

characters therein, at least one of the fields being a free text field (col. 8, lines 31-67, col. 9, line 1 to col. 10, line 59, Figs. 3-6), the apparatus comprising:

"means for accessing a data store comprising a plurality of index entries each representing a concordance between an entry in a field of an item and an item" at col. 16, lines 29-48, Fig. 13;

"input means for receiving a request for information, the request comprising a natural language phrase" at col. 16, lines 29-48, Fig. 13;

"a parser for parsing the request to determine components of the request" at col. 7, lines 21-48;

"a slot filler arranged to identify one or more object components representing an object of the request from the parsed request, wherein each slot corresponds to a group of index entries and wherein the slot filler is arranged to allocate at least one component to a respective slot of a slot-and-filler request" at col. 12, lines 4-21, col. 19, lines 44-53;

"and a query constructor for accessing the data store, wherein the query constructor is arranged to compare the allocated component with index entries within a group corresponding to the slot of the allocated component so as to identify an index entry corresponding thereto and to use the identified index entry to identify an item in the semi-structured database" at col. 12, lines 6-57, col. 19, line 54 to col. 20, line 17.

As to claims 3, 8, Brown teaches "the free text entry comprises at least one free text word defined by a sequence of alphanumeric characters (col. 7, lines 29-48, col. 16, lines 29-48, Fig. 13), the method further comprising the steps of:

"(iv) identifying at least one free text word in a field by comparing the free text entry with at least one selection criterion defining one or more predetermined characteristics of a free text word" at col. 3, lines 39-47, col. 3, line 66 to col. 4, line 8;

"(v) generating a plurality of index entries representing a concordance between the selected free text words determined in (iv) and the respective records" at col. 4, lines 8-16.

As to claims 4, 9, Brown teaches "the records within the semi-structured database are further arranged in groups of records, each group of records being located in a heading field and being identified by at least one heading entry (col. 10, line 53 to col. 11, line 61, Fig. 8), wherein the method further comprises, for each heading field:

"(iv)identifying heading entries by comparing each heading field with each of a plurality of selection criteria, each selection criterion defining one or more predetermined characteristics of a respective heading entry" at col. 9, line 37 to col. 10, line 11, col. 11, lines 1-16;

"(v) generating a plurality of index entries representing a concordance between the heading entries determined in (iv) and the group of records in the heading field" at col. 12, lines 6-22, Fig. 8.

As per claim 5, Brown teaches "arranging the index entries into groups of index entries in accordance with predetermined criteria" at col. 3, lines 47-64.

As per claim 12, Brown teaches "an index generator comprising a processor arranged, in respect of each item in the semi-structured database, to analyze each field in accordance with a

predetermined criterion so as to identify an entry within said field, and to generate at least one index entry representing a concordance between an identified entry and the item corresponding to the identified entry, and store the generated index entry in the data store" at col. 8, lines 31-67, col. 9, line 1 to col. 10, line 59, Figs. 3-6;

"wherein for each of a plurality of predetermined formats, the processor is arranged to search said free text field to identify a sequence of characters having a format corresponding to the predetermined format, said identified sequence of characters being deemed to constitute an identified entry" at col. 9, line 36 to col. 10, line 59, col. 16, lines 29-48, Fig. 13.

As per claim 13, Brown teaches "wherein for the free text field, the processor is arranged to define any data not identified as an entry as a free text entry" at col. 15, lines 54-61, col. 3, lines 39-47.

As per claim 14, Brown teaches "the free text entry comprises at least one free text word defined by a sequence of alphanumeric characters, the processor being arranged to identify at least one selected free text word for a field by comparing the free text entry with at least one selection criterion defining one or more predetermined characteristics of a selected free text word" at col. 8, line 31 to col. 9, line 16, col. 9, line 36 to col. 10, line 51.

As per claim 15, Brown teaches "the items within the semi-structured database are further arranged in groups of items, each group being located in a heading field and being identified by at least one heading entry, wherein the processor is arranged to identify a heading

entry by comparing each heading field with each of a plurality of selection criteria defining one or more predetermined characteristics of a respective heading entry, and is arranged to generate index entries representing a concordance between such heading entries and the group of items in the heading field" at col. 9, line 37 to col. 10, line 11, col. 10, line 53 to col. 11, line 61, col. 12, lines 6-22, Fig. 8.

As per claim 19, Brown teaches "the data store is part of the apparatus" at col. 8, lines 1-64, col. 3, lines 27-38.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 10, 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (US Patent No. 6,026,398), in view of de Hita et al. (US Patent No. 6,081,774).

As per claim 10, Brown teaches "input means for receiving the request" at col. 3, lines 46-65;

"a parser for parsing the request to determine the components of the request" at col. 12, lines 4-21, col. 19, lines 44-53;

Brown does not specifically teach the following limitations. However, de Hita teaches

"a slot filler for determining whether the request includes any verb components forming a verb or verb group" at col. 11, lines 7-19, col. 1, lines 22-61, Fig. 10;

"and, if the request includes any verb components, the slot filler determines the position of the verb or verb group within the request, and determines any subject components representing the subject of the request and any object components representing the object of the request using the position of the verb or verb group" at col. 11, lines 7-19, col. 1, lines 22-61, Fig. 10;

"and, if the request includes no verb components, the slot filler determines any components to be object components, wherein each slot corresponds to one of the group of index entries and wherein the slot filler is arranged to allocate at least one component to a respective slot of a slot-and-filler request" at col. 20, line 47 to col. 21, line 11, col. 38, lines 7-31, col. 34, lines 11-56;

"and a query constructor for accessing a database" at col. 38, line 47 to col. 39, line 9, wherein the query constructor is arranged to compare each of the components allocated to a slot in the slot-and-filler request to one or more index entries in a respective group of index entries, to select the index entries for records which have entries including any of the components and, to

use the index entries to determine the location of each respective record in the semi-structured database" at col. 39, lines 11-43.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Brown with the teachings of de Hita to include "the slot filler...and a query constructor for accessing a database" in order to utilize the same morphological and syntactic analysis on both the language-based database and the query to generate the content-based keywords in generally the same manner from both, increasing the likelihood of the query locating all relevant text in the search language-based database.

As per claim 16, Brown does not specifically teach "the slot filler is arranged to identify verb components forming a verb or verb group in the parsed request and to allocate any such identified verb components to a slot in accordance with a predetermined mapping between verb components and slots". However, de Hita teaches this limitation at col. 11, lines 7-19, col. 18, lines 22-61, Fig. 10.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Brown with the teachings of de Hita to include "the slot filler is arranged to identify verb components forming a verb or verb group in the parsed request and to allocate any such identified verb components to a slot in accordance with a predetermined mapping between verb components and slots" in order to utilize the same morphological and syntactic analysis on both the language-based database and the query to generate the content-based keywords in generally the same manner from both, increasing the likelihood of the query locating all relevant text in the search language-based database.

As per claim 17, de Hita teaches "the slot filler is arranged to identify any subject components in accordance with the position of the verb or verb group within the request and to allocate any such identified subject components to a slot in accordance with a predetermined mapping between subject components and slots" at col. 20, line 47 to col. 21, line 11, col. 38, lines 3-31, col. 34, lines 11-56.

As per claim 18, de Hita teaches "in the absence of identifying verb components, the slot filler is arranged to deem any components to be object components" at col. 38, line 47 to col. 39, line 9, col. 39, lines 11-43.

Response to Arguments

9. Applicant's arguments regarding Boguraev does not disclose that a user request is subject to the actions of the parser, or the slot filler with respect to claim 10, and claims 11-19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Miranda Le whose telephone number is (703) 305-3203. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene, can be reached on (703) 305-9790. The fax number to this Art Unit is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Miranda Le
October 10, 2003

GRETA ROBINSON
PRIMARY EXAMINER